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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
Office Action Summary	10/717,941	BLINICK ET AL.
	Examiner	Art Unit
	Ben C. Wang	2192

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>05 March 2007</u>.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-30* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

1.   Applicant's amendment dated March 5, 2007, responding to the November 20,

2006 Office action provided in the rejection of claims 1-30, wherein claim 1 has been

amended and claims 2-30 are remained as original.

Claims 1-30 remain pending in the application and which have been fully

considered by the examiner.

Applicant's arguments with respect to claims rejection have been fully considered

but are moot in view of the new grounds of rejection – see *Schwabe* art made of record,

as applied hereto.

Claim Rejections – 35 USC § 103(a)

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as
> set forth in section 102 of this title, if the differences between the subject matter sought to be
> patented and the prior art are such that the subject matter as a whole would have been obvious
> at the time the invention was made to a person having ordinary skill in the art to which said
> subject matter pertains. Patentability shall not be negatived by the manner in which the invention
> was made.

2.   Claims 1-13, and 15-30 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Talati (Pub. No. US 2004/0044997 A1) (hereinafter 'Talati') in view of

J. E. Schwabe (Patent No. US 6,986,132 B1) (hereinafter 'Schwabe')

3.   **As to claim 1** (currently amended), Talati discloses an apparatus for updating a

code image (Fig. 2), comprising of a loader configured to load a new code image

([0014], lines 2-3; Fig. 2, element 102; [0047], lines 1-2) into a temporary memory

location (Fig. 1, element 108; [0009], staging area) separate from a memory space (Fig.

1, element 110; [0009], line 2, runtime area) occupied by and used by an old code

image (Fig. 2, elements 218, 110; [0046], lines 1-8; [0047], lines 1-2) and a copy

module configured to copy the new code image into the memory space occupied by the

old code image (Fig. 2, element 202; Fig. 3, element 302; [0013], lines 1-3).

But, Talati does not disclose a conversion module configured to selectively

reconcile incompatibilities between the old code image and the new code image.

However, in an analogous art, Schwabe discloses a conversion module

configured to selectively reconcile incompatibilities between the old code image and the

new code image (Col. 11, Line 58 through Col. 12, Lines 6; Figs. 15A-15B; Col. 20, Line

64 through Col. 21, Line 4, 14-20; Fig. 17; Col. 22, Lines 4-16; Figs. 20A-20D; Col. 24,

Lines 24-32).

Therefore, it would have been obvious to one of ordinary skill in the art, at the

time the invention was made to combine the teachings of Talati and the teachings of

Schwabe to further provide a conversion module configured to selectively reconcile

incompatibilities between the old code image and the new code image in Talati system.

The motivation is that use of the verifier enables verification of a program's

integrity and allows the use of an interpreter that does not execute the usual stack

monitoring instructions during program execution, thereby greatly accelerating the

program interpretation process as once suggested by Schwabe (i.e. Col. 13, Line 66

through Col. 14, Line 8).

4.   **As to claim 10** (original), Talati discloses an apparatus for updating a code

image (Fig. 2, copier copies new code), comprising of an update module configured to

load a new code image ([0014], lines 2-3; Fig. 2, element 102; [0047], lines 1-2) into a

temporary memory location (Fig. 1, element 108; [0009], line 2, staging area) separate

from a memory space occupied by and used by an old code image (Fig. 2, elements

218, 110; [0046], lines 1-8) and a bootstrap module within the new code image that

executes subsequent to the update module (Fig. 2, element 202; [0047], lines 1-2).

But, Talati does not disclose the bootstrap module configured to selectively

reconcile incompatibilities between the old code image and the new code image prior to

copying the new code image into the memory space occupied by the old code image.

However, in an analogous art, Schwabe discloses the bootstrap module

configured to selectively reconcile incompatibilities between the old code image and the

new code image prior to copying the new code image into the memory space occupied

by the old code image (Col. 4, Lines 5-10; Col. 11, Line 58 through Col. 12, Lines 6;

Figs. 15A-15B; Col. 20, Line 64 through Col. 21, Line 4, 14-20; Fig. 17; Col. 22, Lines 4-

16; Figs. 20A-20D; Col. 24, Lines 24-32).

Therefore, it would have been obvious to one of ordinary skill in the art, at the

time the invention was made to combine the teachings of Talati and the teachings of

Schwabe to further provide the bootstrap module configured to selectively reconcile

incompatibilities between the old code image and the new code image prior to copying

the new code image into the memory space occupied by the old code image in Talati

system.

The motivation is that use of the verifier enables verification of a program's

integrity and allows the use of an interpreter that does not execute the usual stack

monitoring instructions during program execution, thereby greatly accelerating the

program interpretation process as once suggested by Schwabe (i.e. Col. 13, Line 66

through Col. 14, Line 8).

5.   **As to claim 13** (original), Talati discloses a system that overlays an old code

image with a new code image with minimal interruption of operations being performed

by execution of the old code image ([0011]), the system comprising of a memory

comprising an old code image (Fig. 1, element 110; Fig. 2, element 108) and a buffer

(Fig. 1, element 108; Fig. 2, element 110) configured to store a new code image; a

processor executing instructions of the old code image to perform one or more

operations (Fig. 1, element 106), the processor configured to execute instructions of the

old code image and the new code image ([0011]; [0032], lines 1-5); a data structure

configured to store an old code image pointer (Fig. 2, elements 204, 208, and 212;

[0023], lines 4-10) and a new code image pointer (Fig. 2, elements 206, 210, and 214;

[0023], lines 11-16); wherein, in response to an interrupt, the processor begins

executing bootstrap code within the new code image ([0040]).

But, Talati does not disclose the bootstrap code configured to reconcile

incompatibilities between the old code image and the new code image.

However, in an analogous art, Schwabe discloses the bootstrap code configured to reconcile incompatibilities between the old code image and the new code image (Col. 4, Lines 5-10; Col. 11, Line 58 through Col. 12, Lines 6; Figs. 15A-15B; Col. 20, Line 64 through Col. 21, Line 4, 14-20; Fig. 17; Col. 22, Lines 4-16; Figs. 20A-20D; Col. 24, Lines 24-32).

Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made to combine the teachings of Talati and the teachings of Schwabe to further provide the bootstrap code configured to reconcile incompatibilities between the old code image and the new code image in Talati system.

The motivation is that use of the verifier enables verification of a program's integrity and allows the use of an interpreter that does not execute the usual stack monitoring instructions during program execution, thereby greatly accelerating the program interpretation process as once suggested by Schwabe (i.e. Col. 13, Line 66 through Col. 14, Line 8).

6.   **As to claim 20** (original), Talati discloses a method for updating a code image (Fig. 2, Copier copies new code), comprising of loading a new code image into a temporary memory location (Fig. 1, element 108; [0009], staging area) separate from a memory space (Fig. 1, element 110; [0009], line 2, runtime area) occupied by and used by an old code image (Fig. 2, elements 218, 110; [0046], lines 1-8; [0047], lines 1-2); copying the new code image into the memory space occupied by the old code image (Fig. 2, element 202; Fig. 3, element 302).

But, Talati does not disclose a conversion module configured to selectively reconcile incompatibilities between the old code image and the new code image.

However, in an analogous art, Schwabe discloses selectively reconciling incompatibilities between the old code image and the new code image (Col. 11, Line 58 through Col. 12, Lines 6; Figs. 15A-15B; Col. 20, Line 64 through Col. 21, Line 4, 14-20; Fig. 17; Col. 22, Lines 4-16; Figs. 20A-20D; Col. 24, Lines 24-32).

Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made to combine the teachings of Talati and the teachings of Schwabe to further enhance selectively reconciling incompatibilities between the old code image and the new code image in Talati system.

The motivation is that use of the verifier enables verification of a program's integrity and allows the use of an interpreter that does not execute the usual stack monitoring instructions during program execution, thereby greatly accelerating the program interpretation process as once suggested by Schwabe (i.e. Col. 13, Line 66 through Col. 14, Line 8).

7.   **As to claim 29** (original), Talati discloses an apparatus for updating a code image ([0014], lines 2-3; Fig. 2, copier copies new code; [0047], lines 1-2), the apparatus comprising of means for loading a new code image (Fig. 2, element 102) into a temporary memory location (Fig. 1, element 108; [0009], staging area) separate from a memory space (Fig. 1, element 110) occupied by and used by an old code image;

means for copying the new code image into the memory space occupied by the old

code image (Fig. 2, element 202; Fig. 3, element 302).

But, Talati does not disclose a conversion module configured to selectively

reconcile incompatibilities between the old code image and the new code image.

However, in an analogous art, Schwabe discloses means for selectively

reconciling incompatibilities between the old code image and the new code image (Col.

11, Line 58 through Col. 12, Lines 6; Figs. 15A-15B; Col. 20, Line 64 through Col. 21,

Line 4, 14-20; Fig. 17; Col. 22, Lines 4-16; Figs. 20A-20D; Col. 24, Lines 24-32).

Therefore, it would have been obvious to one of ordinary skill in the art, at the

time the invention was made to combine the teachings of Talati and the teachings of

Schwabe to further provide means for selectively reconciling incompatibilities between

the old code image and the new code image in Talati system.

The motivation is that use of the verifier enables verification of a program's

integrity and allows the use of an interpreter that does not execute the usual stack

monitoring instructions during program execution, thereby greatly accelerating the

program interpretation process as once suggested by Schwabe (i.e. Col. 13, Line 66

through Col. 14, Line 8).

8.   **As to claim 30** (original), Talati discloses an article of manufacture comprising a

program storage medium readable by a processor and embodying one or more

instructions executable by a processor to perform a method for updating a code image

(Fig. 1), the method comprising of loading a new code image into a temporary memory

location separate from a memory space occupied by and used by an old code image (Fig. 2, elements 218, 110; [0046], lines 1-8; [0047], lines 1-2); copying the new code image into the memory space occupied by the old code image (Fig. 2, element 202; Fig. 3, element 302).

But, Talati does not disclose a conversion module configured to selectively reconcile incompatibilities between the old code image and the new code image.

However, in an analogous art, Schwabe discloses the method of selectively reconciling incompatibilities between the old code image and the new code image (Col. 11, Line 58 through Col. 12, Lines 6; Figs. 15A-15B; Col. 20, Line 64 through Col. 21, Line 4, 14-20; Fig. 17; Col. 22, Lines 4-16; Figs. 20A-20D; Col. 24, Lines 24-32).

Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made to combine the teachings of Talati and the teachings of Schwabe to further provide the method of selectively reconciling incompatibilities between the old code image and the new code image in Talati system.

The motivation is that use of the verifier enables verification of a program's integrity and allows the use of an interpreter that does not execute the usual stack monitoring instructions during program execution, thereby greatly accelerating the program interpretation process as once suggested by Schwabe (i.e. Col. 13, Line 66 through Col. 14, Line 8).

9.   **As to claim 2** (original), Talati discloses the apparatus wherein the old code

image is updated substantially concurrent with normal execution of transactions by the

apparatus ([0006]; [0008], lines 5-12]; [0011]).

10.   **As to claim 3** (original), Talati discloses the apparatus further comprising an

initialization module configured to initiate execution of a run-time segment of the new

code image ([0014]).

11.   **As to claim 4** (original), Talati discloses the apparatus wherein the copy module

copies the new code image into the memory space in response to a load request (Fig.

2, Copier copies new code; Fig. 3, element 302).

        But, Talati does not disclose the apparatus wherein in response to reconciliation

of the incompatibilities.

        However, in an analogous art, Schwabe discloses the apparatus wherein in

response to reconciliation of the incompatibilities (Col. 11, Line 58 through Col. 12,

Lines 6; Figs. 15A-15B; Col. 20, Line 64 through Col. 21, Line 4, 14-20; Fig. 17; Col. 22,

Lines 4-16; Figs. 20A-20D; Col. 24, Lines 24-32).

        Therefore, it would have been obvious to one of ordinary skill in the art, at the

time the invention was made to combine the teachings of Talati and the teachings of

Schwabe to further provide the apparatus wherein in response to reconciliation of the

incompatibilities in Talati system.

The motivation is that use of the verifier enables verification of a program's integrity and allows the use of an interpreter that does not execute the usual stack monitoring instructions during program execution, thereby greatly accelerating the program interpretation process as once suggested by Schwabe (i.e. Col. 13, Line 66 through Col. 14, Line 8).

12.   **As to claim 5** (original), Talati does not disclose the apparatus further comprising a logic module configured to access version information for the old code image and version information for the new code image and identify an incompatibility based at least in part on a difference between the version information.

However, in an analogous art, Schwabe discloses the apparatus further comprising a logic module configured to access version information for the old code image and version information for the new code image and identify an incompatibility based at least in part on a difference between the version information (Fig. 17, element 1440 – version; Fig. 18, element 1470 – version; Fig. 19, element 1515 – verify version of API definition file used during verification is compatible with version of referenced binary file; Fig. 20A – 3. verify backward compatible version with content; Fig. 20C – verify versions using API definitions files, elements of 1600, 1605, and 1610).

Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made to combine the teachings of Talati and the teachings of Schwabe to further provide the apparatus further comprising a logic module configured to access version information for the old code image and version information for the

new code image and identify an incompatibility based at least in part on a difference

between the version information in Talati system.

The motivation is that use of the verifier enables verification of a program's

integrity and allows the use of an interpreter that does not execute the usual stack

monitoring instructions during program execution, thereby greatly accelerating the

program interpretation process as once suggested by Schwabe (i.e. Col. 13, Line 66

through Col. 14, Line 8).

13.   **As to claim 6** (original), Talati does not disclose the apparatus wherein the

conversion module is configured to update modules that interface with the new code

image based at least in part on a difference between the version information.

However, in an analogous art, Schwabe discloses the apparatus wherein the

conversion module is configured to update modules that interface with the new code

image based at least in part on a difference between the version information (Fig. 17,

element 1440 – version; Fig. 18, element 1470 – version; Fig. 19, element 1515 – verify

version of API definition file used during verification is compatible with version of

referenced binary file; Fig. 20A – 3. verify backward compatible version with content;

Fig. 20C – verify versions using API definitions files, elements of 1600, 1605, and

1610).

Therefore, it would have been obvious to one of ordinary skill in the art, at the

time the invention was made to combine the teachings of Talati and the teachings of

Schwabe to further provide the apparatus wherein the conversion module is configured,

to update modules that interface with the new code image based at least in part on a

difference between the version information in Talati system.

The motivation is that use of the verifier enables verification of a program's

integrity and allows the use of an interpreter that does not execute the usual stack

monitoring instructions during program execution, thereby greatly accelerating the

program interpretation process as once suggested by Schwabe (i.e. Col. 13, Line 66

through Col. 14, Line 8).

14.   **As to claim 7** (original), Talati discloses recognizing persistent data associated

with the old code image and associates the persistent data with the new code image

such that the persistent data is available in response to execution of the run-time

segment of the new code image ([00110; [0012] – the conversion module provides two

separate functionalities (a) to selectively reconcile incompatibilities between the old

code image and the new code image cited in claim 1; and, (b) to recognize persistent

data described in this claim).

15.   **As to claim 8** (original), Talati does not disclose the apparatus wherein at least

one of the incompatibilities comprises different initialization requirements.

However, in an analogous art, Schwabe discloses the apparatus wherein at least

one of the incompatibilities comprises different initialization requirements (Fig. 21A,

Lines 25-36).

Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made to combine the teachings of Talati and the teachings of Schwabe to further provide the apparatus wherein at least one of the incompatibilities comprises different initialization requirements in Talati system.

The motivation is use of the verifier enables verification of a program's integrity and allows the use of an interpreter that does not execute the usual stack monitoring instructions during program execution, thereby greatly accelerating the program interpretation process as once suggested by Schwabe (i.e. Col. 13, Line 66 through Col. 14, Line 8).

16.   **As to claim 9** (original), Talati does not disclose the apparatus wherein at least one of the incompatibilities comprises a difference between data structures used by the old code image and data structures used by the new code image.

However, in an analogous art, Schwabe discloses the apparatus wherein at least one of the incompatibilities comprises a difference between data structures used by the old code image and data structures used by the new code image (Col. 22, Lines 30-33).

Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made to combine the teachings of Talati and the teachings of Schwabe to further provide the apparatus wherein at least one of the incompatibilities comprises a difference between data structures used by the old code image and data structures used by the new code image in Talati system.

The motivation is use of the verifier enables verification of a program's integrity and allows the use of an interpreter that does not execute the usual stack monitoring instructions during program execution, thereby greatly accelerating the program interpretation process as once suggested by Schwabe (i.e. Col. 13, Line 66 through Col. 14, Line 8).

17.   **As to claim 11** (original), Talati does not disclose the apparatus wherein the bootstrap module comprises a conversion module configured to reconcile the incompatibilities base on version information for the old code image and the new code image and a copy module configured to copy the new code image over the old code image in response to reconciliation of the incompatibilities.

However, in an analogous art, Schwabe discloses the apparatus wherein the bootstrap module comprises a conversion module configured to reconcile the incompatibilities base on version information for the old code image and the new code image and a copy module configured to copy the new code image over the old code image in response to reconciliation of the incompatibilities (Fig. 17, element 1440 – version; Fig. 18, element 1470 – version; Fig. 19, element 1515 – verify version of API definition file used during verification is compatible with version of referenced binary file; Fig. 20A – 3. verify backward compatible version with content; Fig. 20C – verify versions using API definitions files, elements of 1600, 1605, and 1610).

Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made to combine the teachings of Talati and the teachings of

Schwabe to further provide the apparatus wherein the bootstrap module comprises a

conversion module configured to reconcile the incompatibilities base on version

information for the old code image and the new code image and a copy module

configured to copy the new code image over the old code image in response to

reconciliation of the incompatibilities in Talati system.

The motivation is use of the verifier enables verification of a program's integrity

and allows the use of an interpreter that does not execute the usual stack monitoring

instructions during program execution, thereby greatly accelerating the program

interpretation process as once suggested by Schwabe (i.e. Col. 13, Line 66 through Col.

14, Line 8).

18.   **As to claim 12** (original), Talati does not disclose the apparatus wherein at least

one of the incompatibilities comprises a difference between data structures used by the

old code image and data structures used by the new code image.

However, in an analogous art, Schwabe discloses the apparatus wherein at least

one of the incompatibilities comprises a difference between data structures used by the

old code image and data structures used by the new code image (Col. 22, Lines 30-33).

Therefore, it would have been obvious to one of ordinary skill in the art, at the

time the invention was made to combine the teachings of Talati and the teachings of

Schwabe to further provide the apparatus wherein at least one of the incompatibilities

comprises a difference between data structures used by the old code image and data

structures used by the new code image in Talati system.

The motivation is use of the verifier enables verification of a program's integrity and allows the use of an interpreter that does not execute the usual stack monitoring instructions during program execution, thereby greatly accelerating the program interpretation process as once suggested by Schwabe (i.e. Col. 13, Line 66 through Col. 14, Line 8).

19.   **As to claim 15** (original), Talati discloses the system wherein in response to the interrupt, the processor executes an update module of the old code image that loads the new code image into the buffer (Fig. 3, step 302; [0040]; [0041]).

20.   **As to claim 16** (original), Talati discloses the system wherein the update module stores the old code image pointer (Fig. 2, elements 204, 208, and 212; [0023], lines 4-10) and the new code image pointer (Fig. 2, elements 206, 210, and 214; [0023], lines 11-16) in the data structure.

21.   **As to claim 17** (original), Talati discloses the system of wherein the update module reads a new code image header identified by the new code image pointer (Fig. 2, elements 206, 210; [0034]) to determine the location of the bootstrap code within the new code image ([0037], lines 5-7).

22.   **As to claim 18** (original), Talati does not disclose the system of wherein the

bootstrap code identifies incompatibilities by reviewing capability fields of the old code

image.

However, in an analogous art, Schwabe discloses the system of wherein the

bootstrap code identifies incompatibilities by reviewing capability fields of the old code

image (Col. 9, Lines 6-11).

Therefore, it would have been obvious to one of ordinary skill in the art, at the

time the invention was made to combine the teachings of Talati and the teachings of

Schwabe to further provide the system of wherein the bootstrap code identifies

incompatibilities by reviewing capability fields of the old code image in Talati system.

The motivation is that use of the verifier enables verification of a program's

integrity and allows the use of an interpreter that does not execute the usual stack

monitoring instructions during program execution, thereby greatly accelerating the

program interpretation process as once suggested by Schwabe (i.e. Col. 13, Line 66

through Col. 14, Line 8).

23.   **As to claim 19** (original), Talati does not disclose the system wherein the

bootstrap code identifies incompatibilities by comparing version information of the new

code image with version information of the old code image.

However, in an analogous art, Schwabe discloses the system wherein the

bootstrap code identifies incompatibilities by comparing version information of the new

code image with version information of the old code image (Fig. 17, element 1440 –

version; Fig. 18, element 1470 – version; Fig. 19, element 1515 – verify version of API

definition file used during verification is compatible with version of referenced binary file;

Fig. 20A – 3. verify backward compatible version with content; Fig. 20C – verify versions

using API definitions files, elements of 1600, 1605, and 1610).

Therefore, it would have been obvious to one of ordinary skill in the art, at the

time the invention was made to combine the teachings of Talati and the teachings of

Schwabe to further provide the system wherein the bootstrap code identifies

incompatibilities by comparing version information of the new code image with version

information of the old code image in Talati system.

The motivation is that use of the verifier enables verification of a program's

integrity and allows the use of an interpreter that does not execute the usual stack

monitoring instructions during program execution, thereby greatly accelerating the

program interpretation process as once suggested by Schwabe (i.e. Col. 13, Line 66

through Col. 14, Line 8).

24.   **As to claim 21** (original), Talati discloses the method wherein the old code

image is updated substantially concurrently with execution of regular computer

operations ([0011]; [0014]).

25.   **As to claim 22** (original), Talati discloses the method further comprising initiating

execution of a run-time segment of the new code image ([0049]).

26.   **As to claim 23** (original), Talati does not disclose the method wherein the new

code image is not copied into the memory space until incompatibilities are reconciled.

However, in an analogous art, Schwabe discloses the method wherein the new

code image is not copied into the memory space until incompatibilities are reconciled

(Col. 5, Lines 49-53; Col. 10, Lines 40-44; Col. 11, Line 58 through Col. 12, Lines 6;

Figs. 15A-15B; Col. 20, Line 64 through Col. 21, Line 4, 14-20; Fig. 17; Col. 22, Lines 4-

16; Figs. 20A-20D; Col. 24, Lines 24-32).

Therefore, it would have been obvious to one of ordinary skill in the art, at the

time the invention was made to combine the teachings of Talati and the teachings of

Schwabe to further provide the method wherein the new code image is not copied into

the memory space until incompatibilities are reconciled in Talati system.

The motivation is that use of the verifier enables verification of a program's

integrity and allows the use of an interpreter that does not execute the usual stack

monitoring instructions during program execution, thereby greatly accelerating the

program interpretation process as once suggested by Schwabe (i.e. Col. 13, Line 66

through Col. 14, Line 8).

27.   **As to claim 24** (original), Talati does not disclose the method further comprises

accessing capability information for the old code image and capability information for

the new code image and identifying an incompatibility based at least in part on a

difference between the capability information.

However, in an analogous art, Schwabe discloses the method further comprises accessing capability information for the old code image and capability information for the new code image and identifying an incompatibility based at least in part on a difference between the capability information (Col. 9, Lines 6-11).

Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made to combine the teachings of Talati and the teachings of Schwabe to further provide the method further comprises accessing capability information for the old code image and capability information for the new code image and identifying an incompatibility based at least in part on a difference between the capability information in Talati system.

The motivation is that use of the verifier enables verification of a program's integrity and allows the use of an interpreter that does not execute the usual stack monitoring instructions during program execution, thereby greatly accelerating the program interpretation process as once suggested by Schwabe (i.e. Col. 13, Line 66 through Col. 14, Line 8).

28.   **As to claim 25** (original), Talati does not disclose the method further comprising updating modules that interface with the new code image based at least in part on a difference between the capability information.

However, in an analogous art, Schwabe discloses the method further comprising updating modules that interface with the new code image based at least in part on a difference between the capability information (Col. 9, Lines 6-11).

Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made to combine the teachings of Talati and the teachings of Schwabe to possibly have different capability information with the new code image in Talati system.

The motivation is use of the verifier enables verification of a program's integrity and allows the use of an interpreter that does not execute the usual stack monitoring instructions during program execution, thereby greatly accelerating the program interpretation process as once suggested by Schwabe (i.e. Col. 13, Line 66 through Col. 14, Line 8).

29.   **As to claim 26** (original), Talati discloses the method further comprising determining persistent data associated with the old code image and associating the persistent data with the new code image such that the persistent data is available in response to execution of a run-time segment of the new code image ([00110; [0012]).

30.   **As to claim 27** (original), Talati does not disclose the method wherein at least one of the incompatibilities comprises different initialization requirements.

However, in an analogous art, Schwabe discloses the method wherein at least one of the incompatibilities comprises different initialization requirements (Fig. 21A, Lines 25-36).

Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made to combine the teachings of Talati and the teachings of Schwabe to possibly have incompatible methods in Talati system.

The motivation is that use of the verifier enables verification of a program's integrity and allows the use of an interpreter that does not execute the usual stack monitoring instructions during program execution, thereby greatly accelerating the program interpretation process as once suggested by Schwabe (i.e. Col. 13, Line 66 through Col. 14, Line 8).

31.   **As to claim 28** (original), Talati does not disclose the method wherein at least one of the incompatibilities comprises a difference between data structures used by the old code image and data structures used by the new code image.

However, in an analogous art, Schwabe discloses the method wherein at least one of the incompatibilities comprises a difference between data structures used by the old code image and data structures used by the new code image (Col. 22, Lines 30-33).

Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made to combine the teachings of Talati and the teachings of Schwabe to possibly have the method wherein incompatible data in Talati system.

The motivation is that use of the verifier enables verification of a program's integrity and allows the use of an interpreter that does not execute the usual stack monitoring instructions during program execution, thereby greatly accelerating the

program interpretation process as once suggested by Schwabe (i.e. Col. 13, Line 66

through Col. 14, Line 8).

32.   Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Talati in

view of Schwabe and further in view of Hiller et al., (Patent No. US 6,658,659 B2)

(hereinafter 'Hiller')

33.   **As to claim 14** (original), Talati and Schwabe do not disclose the system

wherein the bootstrap code overlays the new code image in memory with the old code

image in response to reconciliation of the incompatibilities.

        However, in an analogous art, Hill discloses the system wherein the bootstrap

code overlays the new code image in memory with the old code image in response to

reconciliation of the incompatibilities (Fig. 2A, element 206; Fig. 2B; Col. 3, Lines 42-46;

Col. 4, Lines 64-67)).

        Therefore, it would have been obvious to one of ordinary skill in the art, at the

time the invention was made to combine the teachings of Talati and Schwabe and the

teachings of Hill to further provide the system wherein the bootstrap code overlays the

new code image in memory with the old code image in response to reconciliation of the

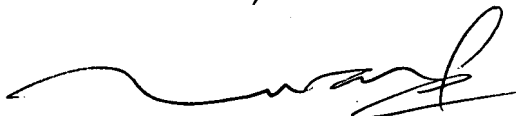incompatibilities in Talati-Schwabe system.

        The motivation is that the system wherein the version aware bootstrap code will

check and ensure that loaded software modules are compatible with one another and

will therefore execute properly as once suggested by Hill (i.e. Abstract, Lines 10-13).

Conclusion

34.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ben C. Wang whose telephone number is 571-270-1240. The examiner can normally be reached on Monday - Friday, 8:00 a.m. - 5:00 p.m., EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Q. Dam can be reached on 571-272-3695. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TUAN DAM
SUPERVISORY PATENT EXAMINER

BCW

May 1, 2007